APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,800	08/30/2000	Simona Cohen	6727/0H610	2081

7590 02/02/2004	EXAMINER
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ART UNIT	PAPER NUMBER
2178	5

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on th cov r sheet with the correspondenc addr ss* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 August 2000*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4)☐ Interview Summary (PTO-413) Paper No(s). _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

1. This action is responsive to application 09/651,800 filed on 08/30/2000, with prior art

   filed on 2/17/2001.

2. Claims 1-29 are pending in the case. Claims 1, 12, and 22 are independent claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-2, 12-13, and 21-23 are rejected under 35 U.S.C. 103(a) as being**

   unpatentable over Srivastava et al. (USPN 6,549,922 B1—filing date 10/1/1999),

   hereinafter Srivastava, further in view of Odom et al. (USPN 5,842,213—filing date

   1/28/1997), hereinafter Odom

4. **Regarding independent claim 1,** Srivastava discloses a method for processing source

   data from a plurality of diverse sources in a selected data domain (in the Abstract,

   Srivastava's invention is disclosed to process metadata, which may obviously be from

   any number of sources since the source of the metadata is the Internet), comprising:

   specifying a unified schema that lists markup tags in the selected data domain that can

   exist in a document in the markup language (in col. 3, lines 40-65, Srivastava specifies

   the use of schemata), and mapping the source data in accordance with the

   correspondences to generate unified data in the markup language (in col. 3, lines 40-65,

   Srivastava describes generation of XML in a database in correspondence with the

schemata). Srivastava fails to define correspondences of data fields from the sources to the markup tags listed by the schema. However, Odom, in col. 24, lines 13-39 describes the correspondence of data fields to markup tags in order to efficiently store structural information associated with data. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Odom's work with associating data fields with markup tags into the invention of Srivastava because it would allow efficient storage of structural information associated with data.

5. **Regarding dependent claim 2,** in col. 3, lines 40-65, Srivastava discloses that the markup language used in the invention is Exensible Markup Language (XML).

6. **Regarding independent claim 12,** it is an apparatus that performs the method of claim 1, and may be rejected under similar rationale.

7. **Regarding dependent claim 13,** it is an apparatus that performs the method of claim 2, and may be rejected under similar rationale.

8. **Regarding dependent claim 21,** Srivastava discloses a plurality of distributed data storage devices, which hold the diverse data sources, wherein the processor is adapted to retrieve the source data from the distributed devices (Srivasta as shown in Figure 1 draws information from the Internet).

9. **Regarding independent claim 22,** it is a software product that performs the method of claim 1, and may be rejected under similar rationale.

10. **Regarding dependent claim 23,** it is a software product that performs the method of claim 2, and may be rejected under similar rationale.

11. **Claims 3, 14, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Call (USPN 6,154,738— filing date 5/21/1999)**

12. **Regarding dependent claim 3,** Srivastava and Odom fail to disclose a method wherein specifying the unified schema comprises specifying a Document Type Definition (DTD). However, Call describes how one can enforce data conformity through the use of DTD's in col. 3, lines 1-10. It would have been obvious to one of ordinary skill in the art at the time of the invention to enhance Srivastava and Odom's inventions by using DTD's in the manner of Call to enforce data conformity.

13. **Regarding dependent claim 14,** it is an apparatus that performs the method of claim 3, and may be rejected under similar rationale.

14. **Regarding dependent claim 24,** it is a software product that performs the method of claim 3, and may be rejected under similar rationale.

15. **Claims 4-5, 10-11, 15-16, 19-20, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Call, further in view of Draper (USPN 6,449,620 B1—filing date 3/2/2000)**

16. **Regarding dependent claim 4,** Srivastava, Odom, and Call fail to disclose that defining the correspondences comprises defining data transformation rules in Extensible Style Language (XSL). However, Draper discloses the use of XSL to define data transformation rules for XML in col. 8, lines 28-45 in order to process structured information pages efficiently. It would have been obvious to one of ordinary skill in the

art at the time of the invention to use XSL as in Draper in order to process structured information pages efficiently.

17. **Regarding dependent claim 5,** Srivastava, Odom, and Call fail to disclose a method wherein mapping the source data comprises transforming the data using an XSL engine. However, Draper discloses the use of XSL to define data transformation rules for XML in col. 8, lines 28-45 in order to transform structured information pages efficiently. Given this capability, it would have been clearly obvious to one of ordinary skill in the art to use it for a mapping. It would have been obvious to one of ordinary skill in the art at the time of the invention to use XSL as in Draper for a mapping in order to process structured information pages efficiently.

18. **Regarding dependent claim 10,** Srivastava, Odom, and Call fail to disclose a method comprising querying the sources by addressing a query to the unified data in the markup language. However, Draper discloses in the Abstract that the interrelated markup language includes a query in order to successfully retrieve data from markup language pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to address a query to the unified data in the markup langue in order to successfully retrieve data from markup language pages.

19. **Regarding dependent claim 11,** Srivastava, Odom, and Call fail to disclose wherein mapping the source data comprises mapping the source data responsive to the query. However, Draper discloses in the Abstract that when the markup language is mapped, it maps source data to source data responsive to the query in order to manipulate the organization of the corresponding information. It would have been obvious to one of

ordinary skill in the art at the time of the invention to map data to data in order to

manipulate the organization of the corresponding information.

20. **Regarding dependent claim 15,** it is an apparatus that performs the method of claim 4,

and may be rejected under similar rationale.

21. **Regarding dependent claim 16,** it is an apparatus that performs the method of claim 5,

and may be rejected under similar rationale.

22. **Regarding dependent claim 19,** it is an apparatus that performs the method of claim 10,

and may be rejected under similar rationale.

23. **Regarding dependent claim 20,** it is an apparatus that performs the method of claim 11,

and may be rejected under similar rationale.

24. **Regarding dependent claim 25,** it is a software product that performs the method of

claim 4, and may be rejected under similar rationale.

25. **Regarding dependent claim 26,** it is a software product that performs the method of

claim 5, and may be rejected under similar rationale.

26. **Regarding dependent claim 27,** it is a software product that performs the method of

claim 10, and may be rejected under similar rationale.

27. **Claims 6-7, 9, and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Srivastava, further in view of Odom, further in view of Kuwahara (USPN

6,202,072 B1—filing date 12/5/1997)

28. **Regarding dependent claim 6,** Srivastava and Odom fail to disclose a method wherein

defining the correspondences comprises selecting one or more of the data fields in the

csources to correspond to one of the makrup tags in the schema and determining a

conversion function to appliy to the one or more data fields. However, Kuwahara, in col. 6, lines 50-60, discloses a tag-based conversion function that offers the advantage of mediating interchanges between file formats. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a tag-based conversion function with the method of Srivastava and Odom in order to mediate interchanges between file formats.

29. **Regarding dependent claim 7,** Srivastava and Odom fail to disclose a method wherein determining the conversion function comprises determining the function so as to generate a data element indicated by the corresponding one of the markup tags. However, Kuwahara, in col. 6, lines 59-60 data and tags are correlated in order to mediate interchanges between file formats. It would have been obvious to one of ordinary skill in the art at the time of the invention to generate data elements indicated by corresponding tags in order to mediate interchanges between file formats.

30. **Regarding dependent claim 9,** Srivastava and Odom fail to disclose a method wherein at least some of the source data are represented in a language other than the markup language, and wherein mapping the source data comprises transforming the data to the markup. However, in Kuwahara's Abstract, plain text is converted to the markup language (SGML) in order to allow greater versatility of input. It would have been obvious to one of ordinary skill in the art at the time of the invention to offer other formats (such as plain text) to be converted into markup language in order to allow greater versatility of input.

31. **Regarding dependent claim 17,** it is an apparatus that performs the method of claim 6,

and may be rejected under similar rationale.

32. **Regarding dependent claim 18,** it is an apparatus that performs the method of claim 9,

and may be rejected under similar rationale.

33. **Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava,**

further in view of Odom, further in view of Kuwahara, further in view of Motoyama

et al. (USPN 5,504,891—filing date 6/13/1994), hereinafter Motoyama

34. **Regarding dependent claim 8,** Srivastava, Odom, and Kuwahara fail to disclose a

method wherein determining the conversion function comprises determining the function

to generate an attribute of the unified data indicated by the corresponding one of the

markup tags. However, Motoyama reveals an attribute conversion procedure in col. 18,

lines 9-34, which has the advantage that it can complete the conversion process for

complex data items. It would have been obvious to one of ordinary skill in the art at the

time of the invention to use an attribute conversion in the manner of Motoyama in order

to help complete the conversion process for complex data items.

35. **Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava,**

further in view of Odom, further in view of Call, further in view of Draper, further

in view of Cianfrocca et al. (USPN 6,088,796—filing date 8/6/1998), hereinafter

Cianfrocca

36. **Regarding dependent claim 28,** Srivastava, Odom, Call, and Draper fail to disclose a

product that comprises middleware, which cause the computer to map the source data

responsive to the query. In Cianfrocca, col. 8, lines 40-67, the inventor describes

middleware, in order to regulate communication on a network. It would have been

obvious to one of ordinary skill in the art at the time of the invention to use middleware

as in Cianfrocca in order to regulate communication on a network.

37. **Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava,
    further in view of Odom, further in view of Call, further in view of Draper, further
    in view of Cianfrocca, further in view of Kleinerman (USPN 6,041,365—filing date
    6/30/1997)**

38. **Regarding dependent claim 29,** Srivastava, Odom, Call, Draper, and Cianfrocca fail to

    disclose a product wherein at least some of the source data are represented in a language

    other than the markup language, and wherein the middleware causes the computer

    transform the data to the markup language. However, Kleinerman, in col. 2, lines 32-46

    indicates that the middleware in the invention is compatible with a plurality of languages

    and protocols to increase the number of possible compatible systems. It would have been

    obvious to one of ordinary skill in the art at the time of the invention to have the

    middleware in a combination of the inventions of Srivastava, Odom, Call, Draper, and

    Cianfrocca to increase the number of possible compatible systems.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,960,194 (filing date 7/17/1996)—Choy et al.

USPN 5,826,258 (filing date 10/2/1996)—Gupta et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan D. Schlaifer whose telephone number is 703-305-9777. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

JS

STEPHEN S. HONG
PRIMARY EXAMINER